

WHAT IS CLAIMED IS:

1. A composition useful for obtaining a high gloss coating,  
comprising:

5 an isocyanate which is at least partially masked by one or more  
masking agent, and having a degree of liberation with respect to the masking agent  
at 120°C of 5% or less; and

10 a polyol having a glass transition temperature of about 40°C or  
more, a hydroxyl number of about 20 mg KOH/g or more and an average  
molecular weight Mn of about 500 g/mol or more.

15 *Sub A1* 2. ~~The composition according to claim 1, wherein the content of tinII  
salts is lower than 0.4% by weight, with the proviso that, when carboxylic acid  
which is free or in the form of a salt is greater than 30 mg KOH/g, the amine  
content is less than 0.6% (equivalent) of the total isocyanate function (masked and  
free).~~

20 3. The composition according to claim 1, wherein the isocyanate is  
completely masked by the one or more masking agent.

4. The composition according to claim 1, wherein the masking agent  
comprises at least one ester function.

25 5. The composition according to claim 4, wherein the at least one ester  
function is an ester of an aromatic carboxylic function.

6. The composition according to claim 1, wherein the polyol has a  
hydroxyl number of from 20 to 400 mg KOH/g.

7. The composition according to claim 1, wherein the polyol has an average molecular weight Mn of from 500 to 15,000 g/mol.

8. The composition according to claim 1, wherein the polyol has a melting point of 130°C or less.

9. The composition according to claim 1, wherein, after mixing, the composition is in powder form.

10. The composition according to claim 1, further comprising titanium dioxide.

11. The composition according to claim 1, wherein the composition is essentially free of catalyst having at least one of the following characteristics:  
a low liposolubility; and  
a solid form.

12. ~~The composition according to claim 1, having a particle size wherein a d80 is about 200 micrometers or less, and a d10 is about 20 micrometers or more.~~

13. The composition according to claim 1, having a coefficient of reflection, when applied to a metal support and after crosslinking, which is greater than 80%, for a 60° angle of incidence.

14. The composition according to claim 1, wherein the isocyanate and the polyol form a binder, and the glass transition temperature of the binder is from 20°C to 100°C.

Sub A2

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15. The composition according to claim 1, further comprising one or more additional isocyanates at least partially masked by the one or more masking agents, wherein polymethylene chains (CH<sub>2</sub>)<sub>n</sub> represent one third or more of the masked isocyanates.

16. The composition according to claim 15, wherein the isocyanates include hexamethylene diisocyanate and isophorone diisocyanate.

17. The composition according to claim 1, wherein the glass transition temperature of the isocyanate is greater than 10°C.

18. The composition according to claim 1, wherein the glass transition temperature of the composition is greater than 20°C.

19. A process for preparing the composition according to claim 1, comprising the steps of preblending the isocyanate, the polyol and any other components in a blender, and melting, homogenizing and dispersing the polyol and other meltable components of the blend in an extruder having one or more screws.

20. The process according to claim 19, wherein the blending temperature and the extrusion temperature are about 130°C or less.

21. The process according to claim 19, further comprising steps of cooling followed by grinding the extrudate, the ground extrudate having a particle size wherein a d<sub>90</sub> is about 200 micrometers or less, and a d<sub>10</sub> is about 20 micrometers or more.

22. A paint composition comprising the composition according to claim 1, wherein the paint is a high gloss paint.

23. The paint composition according to claim 22, wherein the isocyanate and the polyol form a binder.

24. The paint composition according to claim 22, having a coefficient of reflection, when applied to a metal support and after crosslinking, which is greater than 80%, for a 60° angle of incidence.

25. A composition useful for obtaining a high gloss coating, comprising:

an isocyanate which is at least partially masked by one or more masking agent, having a glass transition temperature of about 20°C or more; and

a polyol having a glass transition temperature of about 40°C or more, a hydroxyl number of 20 mg KOH/g or more and an average molecular weight Mn of about 500 g/mol or more;

wherein at least one of the following conditions apply:

- the composition further comprises a carboxylic acid function, with the proviso that, when the carboxylic acid function which is free or in the form of a salt, is greater than 30 mg KOH/g, the amine content is lower than 0.6% (equivalent) of the isocyanate (masked and free);
- the composition is essentially free of an esterification catalyst which is solid and/or non-liposoluble;
- the composition is essentially free of a matt-effect wax; and
- the composition further comprises a liposoluble catalyst.

26. The composition according to claim 25, wherein carbon dioxide is not given off from the composition when heated at a temperature of 180°C for 15 minutes.

5 27. The composition according to claim 25, said composition being essentially free of organic bases.

28. The composition according to claim 25, said composition being essentially free of amines.

29. The composition according to claim 25, wherein a carboxylic function and an esterification catalyst are present.

30. The composition according to claim 29, wherein the esterification catalyst is liposoluble and/or non-solid.

31. The composition according to claim 25, wherein a carboxylic function is present, the isocyanate bearing the carboxylic function in the form of the product of reaction of an agent bearing a carboxylic function and a function which reacts with a free isocyanate function.

32. The composition according to claim 25, wherein a carboxylic function is present, the ratio, in equivalents, of carboxylic functions to isocyanate functions (free and masked) which have reacted with agents bearing carboxylic functions, being 5:100 or more, with the proviso the organic base content is lower than 0.6% (equivalent) of the isocyanate (masked and free).

33. The composition according to claim 32, wherein the ratio, in equivalents, of carboxylic functions to isocyanate functions (free and masked)

which have reacted with agents bearing carboxylic functions, being 5:100 to 90:100.

34. The composition according to claim 25, wherein the acid number of the composition is 20 mg KOH/g or less.

35. The composition according to claim 25, wherein the polyol has a melting point of about 130°C or less.

36. The composition according to claim 25, wherein the average molecular weight Mn of the polyol is from 1000 to 6000 g/mol.

37. The composition according to claim 25, wherein the composition is essentially free of catalyst having at least one of the following characteristics:  
a low liposolubility; and  
a solid form.

38. The composition according to claim 35, said composition being in the form of a powder having a particle size wherein a d90 is about 200 micrometers or less.

39. The composition according to claim 25, having a coefficient of reflection, when applied to a metal support and after crosslinking, which is greater than 80%, for a 60° angle of incidence.

40. The composition according to claim 25, wherein the isocyanate and the polyol form a binder, and the glass transition temperature of the binder is from 20°C to 100°C.

Sub 97  
B3 41. The composition according to claim 25, further comprising one or more additional isocyanates at least partially masked by the one or more masking agents, wherein polymethylene chains (CH<sub>2</sub>)<sub>n</sub> represent one third or more of the masked isocyanates.

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42. The composition according to claim 41, wherein the isocyanates include hexamethylene diisocyanate and IPDI.

Sub A5  
43. ~~The composition according to claim 25, wherein the glass transition temperature (T<sub>g</sub>) of the isocyanate is greater than 10°C.~~

44. The composition according to claim 25, wherein the glass transition temperature (T<sub>g</sub>) of the composition is greater than 20°C.

45. A process for preparing the composition according to claim 25, comprising the steps of preblending the isocyanate, the polyol and any other components in a blender, and melting, homogenizing and dispersing the polyol and other meltable components of the blend in an extruder having one or more screws.

46. The process according to claim 45, wherein the blending temperature and the extrusion temperature are about 130°C or less.

47. The process according to claim 45, further comprising steps of cooling followed by grinding the extrudate, the ground extrudate having a particle size wherein a d<sub>90</sub> is about 200 micrometers or less, and a d<sub>10</sub> is about 20 micrometers or more.

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48. ~~A paint composition comprising the comp~~  
~~aim 23, wherein the paint is a high gloss paint.~~

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